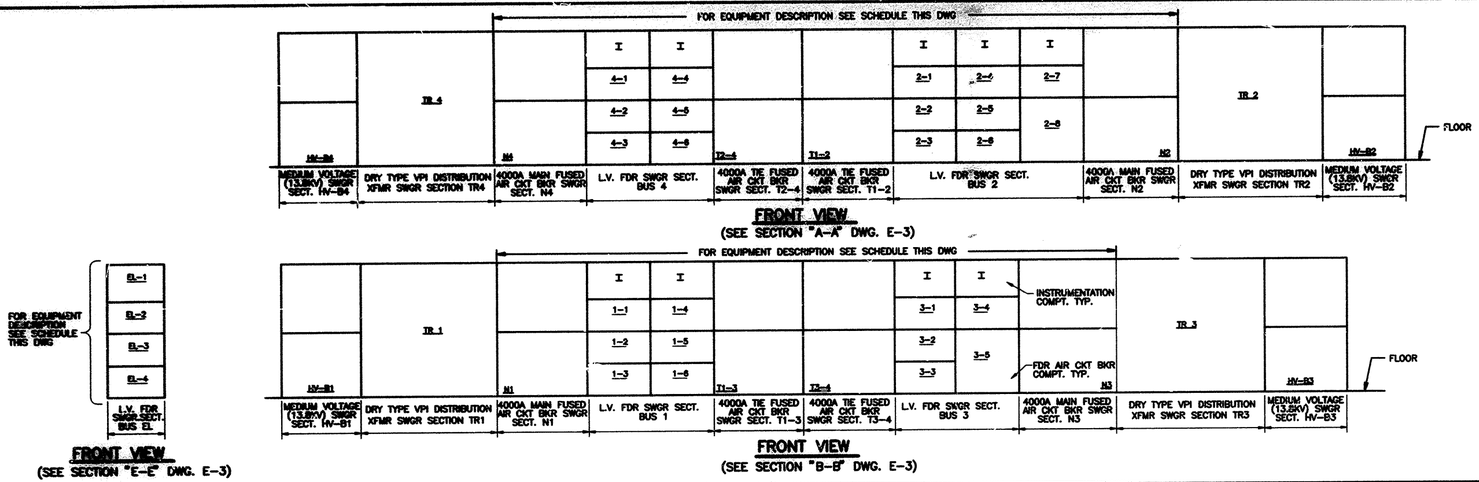

FRONT VIEW
(SEE SECTION "A-A" DWG. E-3)

FRONT VIEW
(SEE SECTION "B-B" DWG. E-3)

FRONT VIEW
(SEE SECTION "E-E" DWG. E-3)

NOTES:

1. FOR LEGEND, ABBREVIATIONS AND SUMMARY OF EQUIPMENT SEE DRAWING E-1

SCHEDULE LEGEND

1. FUSE - CURRENT LIMITING FUSES, SEE SPECIFICATION.
2. SPACE - SPACE SHALL BE A FULLY EQUIPPED COMPARTMENT WITH BUS, PRIMARY & SECONDARY DISCONNECTS & CRADLE FOR DRAWOUT BREAKERS.
3. PROVIDE LUGS ON BREAKER AND GROUND BUS FOR CONDUCTORS SHOWN IN SCHEDULE ON THIS DRAWING.
4. PROVIDE LUGS ON GROUND BUS AS FOLLOWS:
   2000A FRAME = 5-250MCM
   1600A FRAME = 3 #4/0
   800A FRAME = 3 #1/0

X INDICATES REQUIRED
-- NOT REQUIRED

LOW VOLTAGE MAIN, TIE AND FEEDER AIR CIRCUIT BREAKERS SCHEDULE

SWITCHGEAR SECTIONS	BKR COMPT. NO.	LOAD DESCRIPTION	CIRCUIT BREAKER CHARACTERISTICS & ACCESSORIES								FEEDER			
			FRAME	TRIP	SOLID STATE TRIP UNIT L.T.	S.T.	INSTA.	G.F.	U.V. TRIP	MONITORING AND CONTROL FUNCTIONS, SEE SPECS	FUSE (1)	DESIGNATION	CONDUIT QTY	CONDUIT SIZE	CONDUCTORS PER CONDUIT (3)
MAIN FUSED AIR CKT BKR-SWGR SECT. N1	N1	MAIN AIR CKT. BREAKER 75 W B1 N1	4000A	4000A	X	X	X	X	--	--	5000A	--	--	--	
LOW VOLTAGE FDR SWGR SECT. BUS 1	1-1	SPARE	1600A	1600A	X	X	X	X	X	X	2500A	--	--	--	--(4)
LOW VOLTAGE FDR SWGR SECT. BUS 1	1-2	(R2a) 480/277V ELEC. CLOS. "W" 77th TO 84th FL	1600A	1600A	X	X	X	X	X	X	2500A	F-SW75R-2a	--	--	2000A BUSWAY
LOW VOLTAGE FDR SWGR SECT. BUS 1	1-3	SPARE	800A	800A	X	X	X	X	X	X	1200A	--	--	--	--(4)
LOW VOLTAGE FDR SWGR SECT. BUS 1	1-4	(R4) ELEVATOR BUS #EL-75W VIA TRANSFER SWITCH	1600A	1200A	X	X	X	X	--	X	2000A	F-SW75R-4	3	3 1/2"C	3-500MCM & 1 # 3/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 1	1-5	SPARE	1600A	1600A	X	X	X	X	X	X	2500A	--	--	--	--(4)
LOW VOLTAGE FDR SWGR SECT. BUS 1	1-6	PANEL #DP-75W	800A	800A	X	X	X	X	X	X	1200A	(1-6)	2	3 1/2"C	4-500MCM & 1 # 2/0 GND
TIE FUSED AIR CKT BKR-SWGR SECT. T1-3	T1-3	TIE AIR CKT. BREAKER 75 W T1-3	4000A	4000A	X	X	X	X	--	X	4000A				4000A BUSWAY
MAIN FUSED AIR CKT BKR-SWGR SECT. N2	N2	MAIN AIR CKT. BREAKER 75 W B2 N2	4000A	4000A	X	X	X	X	--	--	5000A	--	--	--	
LOW VOLTAGE FDR SWGR SECT. BUS 2	2-1	(R1) 208/120V TRANS'F-ELEC. CLOS. "W" 77th TO 92nd FL	1600A	800A	X	X	X	X	X	X	1200A	F-SW75R-1	2	3 1/2"C	3-500MCM & 1 # 2/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 2	2-2	(R2b) 480/277V ELEC. CLOS. "W" - 85th TO 92nd FL	1600A	1600A	X	X	X	X	X	X	2500A	F-SW75R-2b	--	--	2000A BUSWAY
LOW VOLTAGE FDR SWGR SECT. BUS 2	2-3	SPACE (2)	800A		--	--	--	--	--	--	--	--	--	--	--(4)
LOW VOLTAGE FDR SWGR SECT. BUS 2	2-4	(R5) MOTOR CONTROL CENTER # MW75R	1600A	1200A	X	X	X	X	X	X	2000A	F-SW75R-5	3	3 1/2"C	3-500MCM & 1 # 3/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 2	2-5	SPARE	1600A	1600A	X	X	X	X	X	X	2500A	--	--	--	--(4)
LOW VOLTAGE FDR SWGR SECT. BUS 2	2-6	(R-BT) EMERG LIGHTING PANELS ALTERNATE SOURCE 59th TO 92nd	800A	225A	X	X	X	X	--	X	350A	F-SW75R-BT	1	2 1/2"C	3 # 4/0 & 1 # 2 GND
LOW VOLTAGE FDR SWGR SECT. BUS 2	2-7	(R3) WATER SUPPLY PUMPS (1-75HP & 1-40HP)	800A	400A	X	X	X	X	X	X	600A	F-SW75R-3	1	3 1/2"C	3-500MCM & 1 # 1/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 2	2-8	SPARE	2000A	2000A	X	X	X	X	X	X	3000A	--	--	--	--(4)
TIE FUSED AIR CKT BKR-SWGR SECT. T1-2	T1-2	TIE AIR CKT. BREAKER 75 W T1-2	4000A	4000A	X	X	X	X	--	X	4000A				4000A BUSWAY
MAIN FUSED AIR CKT BKR-SWGR SECT. N3	N3	MAIN AIR CKT. BREAKER 75 W B3 N3	4000A	4000A	X	X	X	X	--	--	5000A	--	--	--	
LOW VOLTAGE FDR SWGR SECT. BUS 3	3-1	(R-17) EBASCO	1600A	1600A	X	X	X	X	X	X	2500A	F-SW75R-17	3	3"C	3-500MCM & 1 # 4/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 3	3-2	(L4b) 480/277V - ELEC. CLOS. "W" - 59th TO 66th FL	1600A	1600A	X	X	X	X	X	X	2500A	F-SW75L-4b	--	--	2000A BUSWAY
LOW VOLTAGE FDR SWGR SECT. BUS 3	3-3	FUJI	800A	800A	X	X	X	X	X	X	1000A	(3-3)	2	3 1/2"C	4-500MCM & 1 # 4/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 3	3-4	(L2) HOT WATER HEATERS	800A	400A	X	X	X	X	X	X	600A	F-SW75L-2	1	3 1/2"C	3-500MCM & 1 # 1/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 3	3-5	(L1) ELEVATOR DISTRIBUTION PANELS EL-B75N-A & EL-B76S-A	2000A	2000A	X	X	X	X	--	X	3000A	F-SW75L-1	5	3 1/2"C	3-500MCM & 1-250MCM GND
TIE FUSED AIR CKT BKR-SWGR SECT. T3-4	T3-4	TIE AIR CKT. BREAKER 75 W T3-4	4000A	4000A	X	X	X	X	--	X	4000A				4000A BUSWAY
MAIN FUSED AIR CKT BKR-SWGR SECT. N4	N4	MAIN AIR CKT. BREAKER 75 W B4 N4	4000A	4000A	X	X	X	X	--	--	5000A	--	--	--	
LOW VOLTAGE FDR SWGR SECT. BUS 4	4-1	(L3) 208/120V TRANS'F. ELEC. CLOS. "W" - 59th TO 74th FL	1600A	800A	X	X	X	X	X	X	1200A	F-SW75L-3	2	3 1/2"C	3-500MCM & 1 # 2/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 4	4-2	(L4a) 480/277V - ELEC. CLOS. "W" - 67th TO 74th FL	1600A	1600A	X	X	X	X	X	X	2500A	F-SW75L-4a	--	--	2000A BUSWAY
LOW VOLTAGE FDR SWGR SECT. BUS 4	4-3	SPACE (2)	800A	--	--	--	--	--	--	--	--	--	1	--	2#2/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 4	4-4	(L7) MOTOR CONTROL CENTER #MW75L	1600A	1200A	X	X	X	X	X	X	2000A	F-SW75L-7	3	3 1/2"C	3-500MCM & 1 # 3/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 4	4-5	(R16) EBASCO	1600A	800A	X	X	X	X	X	X	2500A	F-SW75R-16	2	3"C	3-500MCM & 1 # 4/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS 4	4-6	(LBT) FIRE PUMP (150 HP)	800A	600A	X	X	X	--	--	X	1200A	F-SW75L-BT	2	3"C	3-500MCM & 1 # 2/0 GND
TIE FUSED AIR CKT BKR-SWGR SECT. T2-4	T2-4	TIE AIR CKT. BREAKER 75 W T2-4	4000A	4000A	X	X	X	X	--	X	4000A				4000A BUSWAY
LOW VOLTAGE FDR SWGR SECT. BUS EL	--	L.V. FDR.SWGR. SECT. 75 W BUS EL (INCOMING FEEDER R-4)	--	--	--	--	--	--	--	--	--	F-SW75R-4	3	3 1/2"C	3-500MCM & 1 # 3/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS EL	EL-1	(R10) ELEVATOR DISTRIBUTION PANEL # EL-B-56A	800A	300A	X	X	X	X	--	X	450A	F-SW75R-10	1	2 1/2"C	3-250MCM & 1 # 2 GND
LOW VOLTAGE FDR SWGR SECT. BUS EL	EL-2	(R11) ELEVATOR DISTRIBUTION PANEL # EL-B-63A	800A	400A	X	X	X	X	--	X	600A	F-SW75R-11	1	3 1/2"C	3-500MCM & 1 # 1/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS EL	EL-3	(R12) ELEVATOR DISTRIBUTION PANEL # EL-B-69A	800A	400A	X	X	X	X	--	X	600A	F-SW75R-12	1	3 1/2"C	3-500MCM & 1 # 1/0 GND
LOW VOLTAGE FDR SWGR SECT. BUS EL	EL-4	(R13) ELEVATOR DISTRIBUTION PANEL # EL-B-76A	800A	600A	X	X	X	X	--	X	1000A	F-SW75R-13	2	3"C	3-350MCM & 1 # 2/0 GND

Sheet 11 Of 15

THE PORT AUTHORITY OF NY & NJ

Peter K. Lawrence
ENGINEERING PROGRAM MANAGER WORLD TRADE

Jack Budnick
CHIEF ELECTRICAL ENGINEER

Engineering Department
Design Divisions

The World Trade Center Electrical/HVAC Upgrade Program

Title

ELECTRICAL SUBSTATION EQUIPMENT TOWER ONE AND TWO

ELECTRICAL

TOWER TWO SUBSTATION SS-75W FRONT VIEW & SCHEDULES

No.	Date	Revision	Approved

This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

Designed by	Drawn by	Checked by
FISCHER	D. LEAHY	JM

Date FEB 10, 1995 Scale NONE

Contract Number WTC-802.072A Drawing Number E-10

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